

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) An adaptive filter comprising at least two inputs for receiving at least two signals, and an output for supplying an output signal, characterized in that the adaptive filter further comprises:

5 means for determining coefficient updates in a transformed domain, said transformed domain being the frequency domain;

 an update algorithm with transformed auto- and a cross correlation matrices; and

 means for reducing the effect of correlation between the
10 input signals on the coefficient updates, said reducing means multiplying the frequency domain input signals with the inverse of the input channel's power matrix.

2-4. (Cancelled).

5. (Currently Amended) ~~The adaptive filter as claimed in claim~~
1. An adaptive filter comprising at least two inputs for receiving at
least two signals, and an output for supplying an output signal,
characterized in that the adaptive filter further comprises:

5 means for determining coefficient updates in a transformed
domain, said transformed domain being the frequency domain;

an update algorithm with transformed auto- and a cross correlation matrices; and

means for reducing the effect of correlation between the input signals on the coefficient updates, said reducing means multiplying the frequency domain input signals with the inverse of the input channel's power matrix,

characterized in that said adaptive filter comprises a first order recursive network for determining the input channel's power matrix, said first order recursive network receiving the product of the frequency domain input signals and their conjugates as input, and in that, at each iteration, a certain positive value is added to all elements of the main diagonal.

6. (Previously Presented) The adaptive filter as claimed in claim 1, characterized in that the update algorithm comprises solving a linear set of equations with the input channel power matrix as one of the elements of the linear set of equations.

7. (Currently Amended) ~~The adaptive filter as claimed in claim 1~~
An adaptive filter comprising at least two inputs for receiving at least two signals, and an output for supplying an output signal, characterized in that the adaptive filter further comprises:

means for determining coefficient updates in a transformed domain, said transformed domain being the frequency domain;

an update algorithm with transformed auto- and a cross' correlation matrices; and

means for reducing the effect of correlation between the
10 input signals on the coefficient updates, said reducing means
multiplying the frequency domain input signals with the inverse of
the input channel's power matrix,
characterized in that the adaptive filter comprises means for
directly estimating the inverse of the input channel's matrix using
15 a recursive update algorithm, and in that a limit is imposed on the
eigenvalues of the matrix.

8. (Previously Presented) A signal processing device comprising
an adaptive filter as claimed in claim 1.

9. (Previously Presented) The signal processing device as claimed
in claim 8, characterized in that the device further comprises a
dynamic echo and noise suppressor as a post-processing device
coupled to an output of the adaptive filter.

10. (Previously Presented) The signal processing device as claimed
in claim 8, characterized in that the signal-processing device
comprises a programmable filter.

11. (Previously Presented) A teleconferencing system comprising at least one signal-processing device as claimed in claim 8.

12. (Previously Presented) A voice-controlled electronic device comprising at least one signal-processing device as claimed in claim 8.

13. (Previously Presented) A noise cancellation system comprising at least one signal-processing device as claimed in claim 8.

14. (Previously Presented) A method for filtering at least two signals and for supplying an output signal, characterized in that the method comprises the steps:

determining coefficient updates in the frequency domain;

5 using an update algorithm with transformed auto- and a cross correlation matrices; and

reducing the effect of correlation between the input signals on the coefficient updates by multiplying the frequency domain input signals with the inverse of the input channel's power
10 matrix.